



# UNITED STATES PATENT AND TRADEMARK OFFICE

*A*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/473,522	12/28/1999	KENNETH A. PARULSKI	78744PRC	1080

1333 7590 12/03/2003

PATENT LEGAL STAFF  
EASTMAN KODAK COMPANY  
343 STATE STREET  
ROCHESTER, NY 14650-2201

EXAMINER

LEE, CHI CHUNG

ART UNIT	PAPER NUMBER
----------	--------------

2131

DATE MAILED: 12/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/473,522

Applicant(s)

PARULSKI ET AL.

Examiner

Chi-Chung E Lee

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 December 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 1-2, 4, 6-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Friedman (US 5,499,294 A).

As per claims 1, 9, Friedman discloses a digital camera 11 [see figure 3] comprises:

a) a process (i.e. the encrypting means implemented as a programmed microprocessor, see column 4 lines 40-46) for producing a public/private key pair; and

b) means in the digital camera for subsequent use in encryption of the hash of the digital image (i.e. hash of the image file, see column 4 lines 34-38) to produce the authentication signature [see column 4 lines 44-46].

As per claim 2, 4, Friedman discloses a means for producing a random seed for the private key by hashing an initial image captured by the digital camera [see column 5 lines

Art Unit: 2131

54-60]. Friedman discloses encrypting a hash of the captured image file (i.e. random seed) to produce a digital authentication signature [see column 5 lines 60-67].

As per claim 6, Friedman discloses a method of producing an image authentication signature in a digital camera 11 [see figure 3] comprising the steps of:

- a) producing a public/private key pair in the process (i.e. the encrypting means implemented as a programmed microprocessor, see column 4 lines 40-46); and
- b) storing the private key in a memory in the digital camera for subsequent encryption of the hash of the digital image [see column 7 lines 6-17].

As per claims 7, 8, Friedman discloses a method of authenticating an image captured by a digital camera 11 [see figure 3] comprising the steps of:

- a) producing a public/private key pair in the digital camera (i.e. the encrypting means implemented as a programmed microprocessor, see column 4 lines 40-46); and
- b) storing the private key in a memory in the digital camera [see column 7 lines 46-53];
- c) communicating the public key to a user [see column 8 lines 10-25];
- d) capturing a digital image [see column 9 lines 38-61];
- e) hashing of the image file [see column 4 lines 34-38] to produce the image hash [see figure 3B];
- f) encrypting a hash of the captured image file to produce a digital signature [see column 5 lines 60-67];

Art Unit: 2131

g) authenticating the digital image by hashing the image outside of the digital camera [see figure 3C], decrypting the digital signature using the public key to produce a decrypted signature, and comparing the decrypted signature with image hash produced outside of the digital camera [see column 6 lines 31-52].

As per claims 10-15, the claimed steps corresponds to the functions of the elements of the apparatus claims 1-4, which has been rejected above, and thus rejected with the same reason applied thereto.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman as applied to claims 1, 2, 4, above, and further in view of Numata et al (US 6,654,062 B1).

As per claim 3, Friedman discloses a digital camera further including:

a) a shutter and an image sensor (i.e. CCD ) for capturing images [see column 3 lines 60-65];

Art Unit: 2131

Friedman does not expressly disclose a variable gain amplifier, an analog-to-digital converter for producing digital signals and the processor causing the variable gain amplifier to be in a high gain condition when the initial image is captured.

Numata discloses signal conversion section 12 [see figure 1A] comprises a variable gain amplifier (i.e. gain of amplifier 124) to amplify the analog signals provided from CCD 121 and A/D converter 125 [see column 3 lines 23-37].

References Friedman & Numata are analogous art because they are from same field of endeavor-digital camera.

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to add the variable gain amplifier and the A/D converter because it is well known in the art in the digital camera to use the amplifier to amplify the analog signals in the high gain condition provided from CCD and outputs the amplified signals to A/D converter in turn to convert the analog signals into digital signal.

As per claim 5, Friedman does not expressly disclose the processor includes an image processing algorithm, which uses JPEG compression.

Numata discloses the signal processing section 13 compresses the image data read out from DRAM using a JPEG data compression algorithm [see column 3 lines 38-52].

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to employ the JPEG algorithm because it is well known in the art to use JPEG algorithm to compress the image data. The motivation to employ the JPEG

Art Unit: 2131

algorithm is to compress the image data to save the space in the digital processor's memory.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chi-Chung E Lee whose telephone number is 703-306-4153.

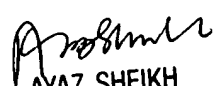
The examiner can normally be reached on 8 am - 5 pm, Mon. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 703-305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

C. L.

Chi-Chung Lee  
11/26/2003

  
AYAZ SHEIKH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100